(b)(3) [illegible]

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7 March 1960

Dr. R. Bircher
Sandoz Pharmaceuticals, Inc.
Hanover, New Jersey

Dear Dr. Bircher:

We have just finished a preliminary assay of the relative potencies of a single dose of LSD-25, 1.5 mcg/kg, and of psilocybin, 210 mcg/kg, on 10 new human subjects, and I thought you might be interested in the results.

As the enclosed table shows, there were no significant differences with respect to any of the measures employed (see previous correspondence for methods), although in 5 of the 7 measures, the effects of LSD-25 were slightly stronger. This trend, I believe, is due to the longer duration of action of LSD-25, with consequent augmentation of the differences- hours values ("areas under the curves"). Clinically, there appears to be no real difference between the peak effects of the two drugs in these dosages, the similarity extending even to the incidence of "true" hallucinations and depersonalizatior, confirming Dr. Isbell's observations with lower doses of psilocybin.

We have now commenced the new cross-tolerance study, on 9 subjects (one dropped out), in which we will use 1.5 mcg/kg of LSD-25 and 210 mcg/kg of psilocybin as control, test and challenging doses, and increase the period of chronic intoxi- cation on each of these drugs to 12 days. Barring unforeseen delays, the study should be finished by May 10, and I hope that shortly thereafter I will be able to send you a summary of the results.

With best personal regards,

Sincerely,

Abraham Wikler, M.D.
Acting Director

AW:bws

Enclosure

B-309

Study 67-C

Preliminary Assay of Relative Potency

LSD-25, 1.5 mcg/kg
vs.
Psilocybin, 210 mcg/kg

(N = 10)

Measure	Difference in Response	t	P
Temperature	- 0.46 ± 0.40	1.65	> 0.10
Pulse Rate	+ 25.55 ± 11.60	2.13	> 0.05
Blood Pressure	+ 35.50 ± 22.81	1.55	> 0.10
Pupillary Size	+ 2.23 ± 1.20	1.85	> 0.05
Knee Jerk	+ 24.63 ± 29.36	0.82	> 0.10
Responses to Questionnaire	+ 9.70 ± 10.74	0.90	> 0.10
Clinical Grade	- 0.05 ± 0.21	0.23	> 0.50

Figures represent mean differences ± standard errors of the mean differences in response to a single dose of LSD-25 and a single dose of psilocybin, t's and p's. None of the differences are significant.

+, indicates LSD-25 stronger in effect than psilocybin.
-, indicates psilocybin stronger in effect than LSD-25.

Note: For every physiological variable and in every subject, direction of change produced by LSD-25 and psilocybin were the same, viz.:

Temperature - elevation
Pulse Rate - acceleration
Blood Pressure - elevation
Pupillary Size - dilatation
Knee Jerk - fall in threshold

B-30A